No 8 Ch.

343 Market St.

Passed March 3d 1828

Dear Sir

This thesis comes on to night at 7 o'clock.
Pray attend for me.

Yours

Jackson

Mr Dr

Monday.

An
Inaugural Dissertation
on
Phthisis Pulmonalis.
for the
Degree of Doctor of
Medicine
in the
University of Pennsylvania
By
Chas G Fowler
New York

Jan 19th. 1828

March 1828

Consumption

The scourge of the civilized World - carrying desolation into the families of thousands - sparing neither youth nor comeliness - blossom nor fruit. In the catalogue of diseases no case is involved in more obscurity; & there is no case in which the powers of our science are exercised with less certainty or with less advantage. It would appear that the want of success in this disease is owing to several circumstances - 1st. That a vast variety of pulmonary affections are embraced under one head, and the same practice is applied indiscriminately, consequently empirically, to all the diversities of the complaint. This arrangement & practice must necessarily produce mischief in this, as in every other case of disease similarly arranged. 2nd, The inherent difficulties are of a very formidable nature.

"an ulcer in the lungs, which constitutes un-"
"doubtedly the worst case of pulmonary consump-"
"tion," is necessarily very unmanageable in the
cure, from the loose and parenchymatous struc-
ture of the lungs. 3d, This difficulty is augmen-
ted by the continual movement of the lungs
in respiration. The real reason of this difficul-
ty (says Dr. Parr) appears now probably as-
certained, and with Dr. Cullen we attribute
it to the suppuration of strumous glands,
which heal with peculiar obstinacy under
much more favourable circumstances.

It was a common observation of the Ancients
that acute diseases are from Heaven; chronic
from ourselves. This observation appears, in
the main correct, especially in the disease
under consideration. Phthisis is not heard of
among savage nations. To the North American
Indians it is entirely unknown. It was scarce-
ly known among the first settlers of the

United States, who, from the nature of their occupations (clearing & subduing the soil,) necessarily led a life subject to innumerable hardships, by which their constitutions were strengthened, ~~and~~ their systems rendered less liable to disease; and from the condition of the country subsisting on a simple fare, healthy, in proportion as it was simple. Dr. Arbuthnot observes that in his time (1732) pulmonary affections constituted about one tenth of the bills of mortality about, and in London. At present, in all England the proportion is much greater, & shews a truly surprising increase, viz. as one fifth; and amounts annually in Great Britain alone, says Dr. Young (an eminent English Physician) to 55,000. deaths. According to the same author one fourth part of the inhabitants of all Europe are swept away by consumption. In the United States the proportion of deaths by consumption to the whole number of deaths, in

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the principal cities, according to a series of Statistical tables, is nearly as follows. In Boston as 1 in 5 — in New York, 1 in 5 — in Philadelphia, 1 in 7 — and in Baltimore, 1 in 6. The question has been asked with astonishment — "Has this been the effect of Civilization"? The remark of Dr. Johnson will (in part at least) answer the question. To die, (Says the Dr.) is the fate of man, but to die with a lingering anguish is generally his own folly.

The general prevalence & almost certain fatality of Consumption demand for it a full share of attention from Physicians, as philanthropists to alleviate suffering, and as men of science to investigate minutely its interesting pathology; "It being a febrile disease of a peculiar nature located in a cellular structure, but that structure previously diseased." The word Phthisis signifies a consuming or wasting; applied to an affection of the lungs ~~use~~ it denotes, according

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to the most approved authorities, an ulcerated condition of those organs; but one kind, we are told, may run its course without organic disease of the lungs.

Portal made 14 species of Phthisis - Morton Sixteen - Sauvages twenty; chronic catarrh, pleurisy, bronchitis, laryngitis, were included; Bayle makes six species, viz. tubercular, granular, melanosis, ulcerous, calculus, & cancerous; these all appear but as modifications of tubercles; out of nine hundred cases related by Bayle six hundred & twenty four were tubercular, one hundred & eighty three granular, seventy two melanosis, fourteen ulcerous, four calculous, three cancerous; this division is of little practical importance, as they are according to Bayle distinguished by examinations post mortem, not by symptoms.

It is impossible to embrace all its varieties under one head, and any practitioner

called on to include them in one definition would find himself embarrassed, if not entirely incompetent to the task.

Phthisis Pulmonalis

That peculiar habit of body, termed Scrofulous, is peculiarly obnoxious to this disease, and is characterised by a delicate organization of blood-vessels. "It exhibits, therefore, in all its stages a strong disposition to hemorrhage." This disposition manifests itself more particularly at, or about the age of puberty in producing tubercular consumption, the peculiar feature of which is its connexion with tubercles of the lungs. The lungs are peculiarly liable to disease at the period of puberty, as at that age all the parts being fully developed, the last efforts of growth

are directed to the thoracic organs, which have an undue supply of stimuli, & are violently exerted, become inflamed — which is the more violent as the bony parietes no longer yield to their enlargement.

Dr. Abercrombie does not suppose that the existence of a scrofulous diathesis necessarily gives to ulceration an unhealthy character, as scrofulous glands may be extirpated, & the wound healed favourably; whereas had it been allowed to advance to suppuration the ulcer would have been most unhealthy. Blisters & issues, the Dr. says, in a scrofulous habit do not necessarily produce scrofulous sores, and that we may observe in the same person, at the same time scrofulous ulceration in one part of the body, & in another the most healthy suppuration. He, therefore refers for the cause of unhealthy ulceration to

certain changes that have taken place in the structure of the parts affected.

Dr. Parr considers tubercles as conglobate glands enlarged in consequence of that state of the constitution which constitutes scrofula; and that this (scrofula) arises from a want of irritability in the circulating, particularly the lymphatic circulating system, & hence an inability to propel ~~their~~ its contents.

Dr. Armstrong, as the result of his observations, is of opinion, that true tubercular consumption only occurs in habits of the strumous temperament, & that it yet remains to be proved whether tubercles ever are formed in the lungs without an hereditary pre-disposition. Dr. A. supposes the seat of scrofula to depend on irritability of the capillaries of the lungs, and this irritability being more abundant in one organ from its construction than in

another, & partly on the morbid impressions being directed chiefly to those organs. Thus in one subject the glands of the skin will be attacked; in another those of the mesentery; and in a third the lungs; and further that a pre-disposition to genuine Phthisis consists chiefly in an unusual irritability of the capillary arteries in the cellular connecting membranes of the lungs, and wherever this pre-disposition exists, any cause irritating or stimulating the lungs may lead to the formation of tubercles, and where this pre-disposition is absent it is probable that no such cause can ever exist, much less produce the disease in question. Dr. A. remarks that the tubercles themselves are probably formed by exudations from the minute vessels in the connecting cellular tissue of the lungs; that these exudations become partially

organised, yet may be considered acting as extraneous bodies from the obstruction they offer to the pulmonary circulation, and the local irritation they produce. From examinations post mortem of the bodies of young children and those of adults where no external signs of pectoral disease had previously existed (Dr. A.) was led to believe that tubercles might sometimes be congenital.

Loyd, in his treatise on scrofula, relates two cases to shew that Phthisis is hereditary, and proves that tubercles may be congenital; the examinations were made on the fœtuses of women who had died of Phthisis. Of the 2 cases reported each had their lungs studded with tubercles some of which had suppurated, and destroyed portions of the lungs - the bodies in other respects free from disease.

Dr. Rush does not consider a scrofulous diathesis the pre-disposing cause in the United States; but that tubercles are the effect of a general debility communicated to the bronchial vessels, which causes them to secrete a preternatural quantity of mucus into the substance of the lungs, which gives rise to the tumours called tubercles.

In Mexico scrofula is unknown, whereas Phthisis is very common. This might appear to sustain the opinion advanced by Dr. Rush. From the observations of Dr. Armstrong it appears that he considers the scrofulous diathesis as much concerned in the diseases of the lungs, as in the scrofula itself. According to Stahl tubercles are formed in the lungs of all sizes from that of a mustard seed to the bigness of horse-beans, and

are generally met with in considerable numbers. On cutting into them they appear of a white, smooth, cartilaginous nature. In the smallest no cavity or opening exists, but in such as are further advanced minute apertures like pin-holes are discoverable; the tubercles which are still larger have one, or more cavities containing a fluid like pus, which being removed small openings are perceptible at the bottom, from which on pressure between the fingers more purulent matter may be forced out. The larger tubercles on being opened are found to be mere capsules or reservoirs into which enters a branch of the bronchia, affording passage for the matter expectorated.

From the dissections of Bayle (a French author) it appears they are occasioned by a deposition of matter from the capillaries of the lungs, not depending on inflammation or irritation, & that sometimes

times they are cheesy, sometimes chalky; at others cartilagenous, & even osseous; thus formed the tubercles may remain for a great length of time, even for many years, indolent & inactive with little or no inconvenience to the patient; at length, however, excited by the ordinary causes of inflammation Phthisis Pulmonalis commences. At first the tubercles merely enlarge, become red & more vascular in the involving membrane; the tubercles themselves becoming soft, and opaque or greyish, first in the centre & extending to the circumference; after a short time a minute cavity is formed in the centre of the tubercles in which is found a small quantity of illaudable pus. This cavity gradually increases, or several unite in one, & an abscess is formed, denominated an occult vomica; this bursting (then called open vomica) discharges its contents into the bronchia through which it is expectorated. The vomicæ are lined by a smooth, white membrane easily detached,

and this Bayle supposes may secrete pus. At other times, says Bayle, the vomica are embraced in a cartilaginous substance; these are termed encysted tubercles. After the rupture of the abscess the ulceration rapidly advances, till finally nearly the whole substance of the lungs is ~~are~~ destroyed, or involved in one mass of disease. It sometimes happens that only one tubercle at a time takes on suppuration; under such circumstances the progress of the disease is exceedingly lingering & protracted; now & then the ulcer heals & a temporary remission or suspension of the disease encourages the hopes of an immediate recovery.

Bayle says, that the tubercles at times are so numerous & small as to make the inner surface of the lungs look & feel as though they had been dropped in fine sand, & that death sometimes occurs before maturation or ulceration. A patient may continue in this situation for years; one

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of the tubercles becomes inflamed; a vomica is formed; it bursts; the contents are discharged; it heals; & for some time the patient may appear well, & remain so until exposed to some of the exciting causes; another tubercle or more then takes on inflammation & runs through all the stages of the first, and a number of tubercles becoming affected at the same time, the patient becomes exhausted & dies.

According to Laennec bands of the natural tissue of the lungs, condensed & charged with the tuberculous degenerations, cross the abscesses formed in these organs, in a manner resembling the columnæ carneæ of the ventricles, smaller in the middle than at the extremities; these, it would appear according to Laennec, have been mistaken by Bayle for blood-vessels. From the examinations that have been made of these cavities it appears that no blood-vessels cross them, but that the smaller ones are destroyed,

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and the larger before they reach the abscess are either wholly or partially filled with a fibrous substance which prevents hemorrhage, though the greater part of the lungs is diseased.

Bayle & Laennec do not consider tubercles as one of the terminations of inflammation or irritation, or connected in any way with these processes, but a deposition from the capillaries of a peculiar nature.

The French Pathologists divide inflammation into three species, 1st. – that which arises in those parts, or those vessels which carry red blood; Second, – in those which carry lymph or Serum; & the third is of a mixed kind. It is the inflammation of the second of these, viz. those vessels that carry a white or serous fluid, that Professor Chapman alleges to be the cause of the formation of tubercles, & that though often connected with a scrofulous diathesis, it does not always depend on it, but that the

diathesis is at times essentially different from the scrofulous, & which he designates as the tubercular diathesis.

Causes. Among the most common exciting causes of Phthisis are Catarrh & ill-cured pneumonic inflammation, repelled eruptions, & the suppression of accustomed evacuations or hæmorrhoids; excesses of every kind, debilitating evacuations, violent emotions, long continued anxiety, & close application to study, neglecting proper exercise; all tend to favour the appearance of Phthisis. Sudden changes of apparel, damp beds, exposure when heated to cold, & playing on wind instruments are mentioned as frequent causes of this complaint, Drinking vinegar to improve the figure & render the countenance pale & interesting is mentioned as a cause by Dessault; to which may be added eating paper & chalk for the same purpose. Various other causes are assigned as giving rise to Phthisis. Those engaged in certain occupations

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as Stone-cutters, miners, workers in certain metals are said to be peculiarly liable to it, as needle-grinders, also millers. This is attributed to the small particles of stone, metal & flour being inspired. This does not appear to be correct, as it is the office of the lungs to excrete & throw out offending matter, in the place of which nothing but air is received. The nature of their occupations would account for it more satisfactorily. The lungs of Stone-cutters for the most part are in a compressed & laborious condition during their most active exertions, & thereby sufficiently irritated for the production of tubercles at least in pre-disposed subjects. The situation of miners induces debility, & may thus predispose to an attack. Who that has visited a mill and observed the stand (the sternum against the edge of the hopper thus supporting the weight of the head & shoulders) the miller invariably takes would be surprised that

there is a cough that has obtained the popular name of 'the miller's cough'? Would it not under such circumstances be far more surprising to find lungs free from disease?

That we are, in miners &c. to look for the deleterious effects of their occupations somewhere else than to the small particles taken into the lungs, or to the poisonous exhalations respired, is apparent, as a small quantity of food previous to ~~such~~ exposure effectually guards them from injury.

Dr. Paris states that the miners in Cornwall before exposure to the arsenical vapours take sweet-oil, the efficacy of which is so satisfactorily ascertained that the proprietors allow annually a sum sufficient to procure oil for the use of the workmen. If the vapours or small particles entered the trachea, & thus produced their bad effects, I cannot imagine how a little sweet-oil in the stomach could

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counteract their deleterious effects.

Symptoms. The diagnosis of Phthisis at an early stage is of the greatest moment, and though the symptoms in general are sufficiently uniform to admit of detail, yet the anomalous symptoms, & wandering pains render it somewhat embarrassing to the practitioner. Boerhaave used to tell his pupils that a burning & dryness in the palms of the hands especially towards evening, rheumy eyes after sleep, increased urinary discharge, the skin dry, more particularly the feet, in the morning, has never deceived him. Dr. Rush remarks that he has known a hoarseness to be the first symptom of an approaching Phthisis.

In young persons "of very fair hair, white teeth, clear skins, large veins, blue eyes, delicate florid complexion, great sensibility, weak voice, contracted chest, & high shoulders" the

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slightest determination to the lungs should excite alarm & claim particular attention. Among the first symptoms of the formation of tubercles is a slight, dry, tickling cough, as though a little mucus or phlegm hung at or about the epiglottis; though the cough at this period is most frequently dry, there is sometimes an expectoration of glairy mucus. The patient at times complains of slight pain in some part of the chest or side, which, at first wandering, soon becomes permanent. He complains of fatigue from the least exertion; the respiration is hurried from the same cause with a sense of constriction or oppression at the chest; the body becomes gradually leaner, and great languor, with indolence, dejection of spirits & loss of appetite prevail. The pulse is often in the commencement natural, or small, soft, & somewhat

accelerated; the symptoms above enumerated continuing for any length of time, it becomes full, hard & frequent. If examined at this period it will be found accelerated and above eighty; towards night & after meals especially of animal food it will be found nearly one hundred in a minute; the patient will at this stage experience an inability to make a full inspiration, & each attempt will cause a catch or cough; there will at the same time be a disposition to sigh. As the disease advances there will be an inability to lie on one side or the other without exciting a fit of coughing, or the difficulty of breathing being much increased. Dr. Parr asserts that if the patient can lie on the side in which the pain is experienced, the disease is not Phthisis.

This state of things continuing for a considerable length of time during which the patient is,

~~accelerated; the sym~~ in general affected by the least change in the atmosphere and very subject to take cold from the least exposure; the cough becomes gradually more troublesome and is attended with expectoration of pus, which is more free towards morning; at this period Hæmoptysis is liable to occur, which, says Gregory, may be said to characterise the first stage of Phthisis Pulmonalis with as much certainty as purulent expectoration does the second.

Pus has been considered the true characteristic symptom of Phthisis; when viewed with a microscope it exhibits, we are told, by Sir Everard Home, the appearance of globules. Mr. John Hunter remarks that mucus examined after the same manner appears to be made up of flakes. Darwin directs the following as an accurate test for pus. Dissolve the expectorated matter in sulphuric

acid & in caustic alkaline lixivium; then add pure water to both solutions & if there is a fair precipitation in each it is a certain sign of the presence of pus, but if there is no precipitation in either it is a certain test that the substance is entirely mucus. The oxymurias hydrargyri be found to coagulate mucus but not pus.

Dr. Young of London in a treatise on consumption mentions a very simple criterion of pus. If a small portion of the substance to be examined be placed between two pieces of plate glass, by holding it thus placed near the eye, and looking through it at a distant candle with a dark object behind it, we shall observe even in the day-time a bright corona of colours of which the candle is the centre, a red one being surrounded by a green & this again

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by another of red; if the substance be simply mucus there may be a red one but none of the green will appear. As symptomatic of Phthisis & indicative of great danger we have hectic fever; "a fever of local irritation in a weakened state of the constitution." Its appearance is very gradual, but not regular. There are generally two daily paroxysms, a morning & evening paroxism, the latter more severe, and followed by colliquative sweats; these are at times local. After the evening paroxism the sweating continues for the most part during the night. The patient may get some sleep after the paroxysm, but when he awakes finds himself bathed in perspiration, & exceedingly exhausted. In the latter stage there is a tendency to metastasis to the bowels; this taking place there is an abatement of cough, fever &c.

and the night sweats are less profuse. A darrhea is much to be dreaded, as it generally closes the tragic scene, rendered doubly tragical as it so frequently falls on the most beautiful, amiable & best of created beings.

Diagnosis. Chronic inflammation of the bronchiæ may be distinguished from Phthisis by the wheezing at the same time that the patient will be able to take a full inspiration without experiencing uneasiness; the lips have not that bright colour manifested in Phthisis, but are of a leaden or blue cast. The colour of the face is more permanent. In chronic Catarrh the cough is deep; the expectoration easy from the commencement, & to the last is copiously blended with mucus; there is also some degree of inflammation at the upper portion of the Pharynx of a pale red colour &

the patient can lie with more ease on either side than in Phthisis.

An ulcer of the trachea may supervene a chronic inflammation of that organ. This most usually occurs in the aged; when it occurs, the pain is generally referred to some particular spot on the trachea. It was by attending to this local symptom, we are informed by Morgagni, that when a young man he detected an ulcer in the trachea of a person of distinction & this he dates as the commencement of his celebrity, as from this circumstance he immediately obtained an extensive reputation.

Chronic inflammation of the Pleura is distinguished by pain or a dragging sensation in the side being confined to a particular spot. This is often so obscure as only to be experienced during a paroxysm of coughing; the expectoration is usually scanty,

and consists of mucus. In peripneumony the sputa are of a light colour, somewhat yellow or green, of great tenacity & mixed with bubbles of air. Dr. Rush remarks that Phthisis & Peripneumony differ only as the protracted shadow of the evening does from that of the noon-day sun.

It is very evident that diseases very different have been mistaken for Phthisis, and that an accurate diagnosis is as yet a desideratum.

The only disease with which Hectic fever may be confounded is intermittent fever. It is of practical importance that the diagnosis should be accurate as at times hectic fever is the first symptom that is particularly noticed, and would be greatly aggravated if treated for intermittent. The paroxysms of hectic are seldom regular, occurring at any hour of the day or night.

The fever is not always preceded by a sense of chillinefs, nor does a fever always follow a chill. In the middle of a fever the chillinefs will sometimes return, which Dr. Heberden notes as a certain symptom of hectic. Galen says the pathognomonic sign is "the fever being increased after eating and drinking"; perspiration after the fever does not relieve the patient, & when the sweat is over the fever may return; besides this the sleep is not refreshing.

Hectic is always attended with a circumscribed blush on the cheek entirely peculiar which Byron very aptly illustrates & forcibly contrasts with the roseate hue of health,

"Heaven . . . . . yet shed"
"A sun-set charm around her & illume"
"With hectic light the Hesperus of the dead"
"Of her consuming cheek the autumnal leaf-like red."

In hectic the appetite & powers of digestion

remain unimpaired; the bowels are regular unless the disease has considerably advanced, they then become costive; but towards the close the case is exactly reversed. The tongue is clear, preternaturally florid & polished; in intermittents it is foul & of a white or bilious hue. During a paroxysm of the ague the urine is clear; the reverse occurs in hectic fever. During the apyrexia the cases are reversed.

That the functions of the brain should be so little affected in Hectic is its most striking peculiarity. Even during the exacerbations head-ache does not always occur & there is seldom any at other times. The decay affects the frame alone; it appears powerless on the mind which in some cases shines with a brilliancy & strength that appear too much for the frail casket in which it is enshrined.

The mental faculties in general remain unimpaired throughout the disease, with one exception. On the prospect of recovery the judgement is nearly always erroneous. The question has before been asked whence spring the never-dying hopes of him whose lamp is already flickering. In answer we are compelled to imitate Dr Parr & exclaim 'it is truly singular'! Well might Campbell say of Hope.

"She lights her torch at Nature's funeral pile".

Prognosis. This is necessarily unfavourable. Laennec remarks that tubercles tend essentially to increase in size & become soft, & that a removal of the exciting cause has been mistaken for a cure. Laennec considers that tubercles must necessarily run their course & that a cure can only be effected when this has been accomplished. The cure is then performed

he remarks, by the formation of a fistula or more permanently by cicatrization. Nearly all writers agree that it is in the very commencement alone that we can reasonably expect a cure. On the curability of Phthisis Dr. Thomas remarks the unkindly nature & secretion of these ulcers; their number, their inaccessibility to any direct application, the impossibility of excluding the atmospheric air from them, or obviating its influence & lastly of preserving the morbid lungs in a state of quietude constitute a chain of circumstances through which the arm of science, however ably directed, will never break. Dr. Parr asserts that in six distinct, well-defined instances he has seen recoveries perfected by nature. Dr. Good has seen one instance of recovery when reduced to such a condition as to expectorate a pint & an half

of pus, or purulent mucus daily, attended by exhausting night-sweats & anasarca. Whether this cure was to be attributed to the means employed or to the efforts of Nature, Dr. G. does not decide.

Treatment. For practical purposes, Dr. Thomas observes, it may be sufficient to distinguish carefully between pulmonary consumption, which occurs in persons of the strumous temperament, & that which attacks constitutions of a different description from accidental causes, such as exposure to cold, or as the consequence of other diseases.

Among the hemorrhages is the order in which it is arranged by Cullen.

Dr. Horsack, however, prefers as the best distinction that can be made, to divide the disease into two stages, the acute and the chronic, & accordingly has thought proper to give it a place among the

phlegmasiæ. Dr. H. thinks there has not been sufficient importance attached to the division of Phthisis into acute & chronic, and as the leading indication is plainly to arrest the progress of inflammation in the tubercles, so as to prevent suppuration & its consequences, that the direct antiphlogistic treatment has not been as active in the acute stage as the emergency demanded; which treatment is pushed with such decided efficacy in other inflammatory affections of the breast.

Dr. Thacher relates the case of a young Lady who was attacked with all the symptoms of this disease, viz. pain in the chest, frequent cough, the expectoration of matter manifestly purulent, the regularly formed hectic, returning at mid-day & at night, the circumscribed

flush of the cheek &c. Having lost ten sisters with consumption she indulged very little hope of relief. This case was treated as one of pure pneumonia, and the event justified the views taken of the disease, for by the remedies prescribed the Lady was restored to perfect health.

Dr. Rush recommends the same active treatment & mentions several cases in which it was attended with the most decided success. Dr. Dover recommended venesection & that in the beginning a moderate quantity of blood should be taken away each day for eight or ten days in succession, and after this every two or three days for a much longer time, so that in some cases he bled the patient about fifty times. Venesection is indicated whether we consider Phthisis a local

disease or a disease of general debility:- As the case is inflammatory in the commencement, the indication is to ~~pro~~ produce arterial excitement & for the attainment of this it is necessary to withdraw a part of its stimulus. It is evident that we are not to pay attention so much to the quantity of blood taken as to the state of the system from which it is taken; if this is too weak & irritable to bear the excitement produced by its natural stimulus the blood, the indication is plain; withdraw a part of that stimulus & thus accommodate the stimulus to the state of the system.

When hamoptysis occurs, the pulse hard & contracted with difficulty of breathing, a fixed pain in the side, skin hot & husky, the cough dry & hard, or where pleuritic

symptoms intervene venesection will not only be proper but cups may be applied at the same time with advantage. This latter is beneficial not only by abstracting blood from the circulation but at the same time a a powerful counter irritant. In using the lancet we should bear in mind the importance of early subduing inflammation on one hand & on the other the extreme debility that is an attendant of the case, & the tendency of the remedy to increase the exhaustion of the vital energy. If from the circumstances we do not wish to bleed dry cupping may be resorted to with signal advantage. About forty are to be applied to the whole chest & this repeated every third or fourth day.

Blisters. The efficacy of counter irritants.

in this complain has long been known & acknowledged. This may be accomplished either by a blister, seton or issues. The Ancients were in the practice of applying very extensive issues; these to be useful should be extensive & frequently renewed, otherwise they will act merely as drains. Blisters are at present decidedly preferred. Dr. Armstrong recommends the application of small blisters, as by this practice a more constant irritation is kept up. He recommends that the first dressing be with common cerat & that on the second, the whole of the blistered cuticle be torn off, & the denuded surface dressed with the ordinary blistering ointment until a considerable slough is formed. The sore is then allowed to heal & the process repeated as long as the disease

may remain unsubdued. He mentions that he has seen this treatment succeed when every other expedient had failed. When the blisters, says Dr. Parr, are designed to relieve the violence & harshness of the cough they should be applied to the nape of the neck, as a prophylactic blister should be applied as soon as any pain is experienced, which may lead us to suspect a local affection of a Phthisical kind; they should be applied immediately to the part affected; if the pain changes its situation it should be scrupulously followed with blisters; many cases are upon record attesting the beneficial influence of this last-mentioned practice.

The remedies considered next in importance are emetics. They do good by reducing or tending to reduce vascular action, hence obviating hæmoptysis and by their extensive influence restore in part the equilibrium of the

circulation. Emetics relieve dyspnoea & abate the cough, facilitate expectoration & remove cutaneous constriction. Professor Chapman advises that emetics to be useful should be recurred to every two or three mornings for ~~two~~ several weeks in succession & when this cannot be borne or will not be submitted to, their occasional use must be recommended. According to Dr. Reid ipecac— should be exhibited morning & evening so as to excite vomiting once or twice each time; by this mode of treatment we in part obtain the beneficial effects of a ~~sea~~ voyage. Dr. Reid remarks that the sympathy existing between the lungs and stomach is peculiar & should the former be diseased it will be rendered still more obnoxious to the influence of the latter. The indication met by frequent & gentle emetics as above directed consists not alone in removing the acrid or irritating contents of

the stomach, but the active vomiting being so frequently induced, the lungs at each time being strongly compressed are enabled to discharge whatever of mucus or purulent matter may be present, thus relieving the patient of an harassing cough & giving rest to the lungs which, says Dr. Reid, is the important indication thus obtained. Dr. Rush objects to the indiscriminate use of emetics, as advised by Dr. Reid; at the same time when used occasionally he admits of their great & decided efficacy.

Practitioners have in general preferred ipicac: The dry vomit (recommended by Dr Marryatt) consisting of equal parts of blue vitriol & tartar emetic ~~ipecac~~ has been greatly extolled, giving at the same time as much as the stomach will bear of Dr. Griffith's myrrh & steel mixture. Dr. Thomas recommends this practice, he informs us from experience; having adopted it in many cases

of incipient Phthisis with decided advantage. Sulphuretted Copper has been proposed as an emetic; it is said to be little else than an evacuant of the stomach. It was a practice says Dr. Parr, among the Ancients to induce vomiting by forcibly introducing articles into the trachea.

In France emetic medicines have been given very much diluted, as the one eighth of a grain of tartar emetic in a pint of water for the common drink. We are told by M. Lenthois that this mode of treatment is more successful than any other & that by exhibiting emetic tartar after this manner, we command all the good effects of digitalis, whilst there is no danger to the patient of experiencing its noxious qualities.

Opening the thorax has been proposed that the lung collapsing might be at rest, and thus afford the ulcer an opportunity to heal.

By the close observation of that accurate and minute examiner Professor Physic, the relaxation of the uvula has been found to be the exciting cause of a long-continued cough, with all the other symptoms of Phthisis pulmonalis.

As a part of this same plan of treatment it is customary to recur to other articles calculated to reduce the force of the circulation; to attain this some practitioners prescribe saline purgatives & though sometimes very beneficial the least excess in their operation must be carefully watched, as, "in every form of pulmonary complaint it will be productive of mischief;" the neutral salts are useful, says Dr. Parr, in every stage of the disease, particularly nitre in small doses of ten or fifteen grains two or three times each day. Dr. Rush limits their usefulness to the inflammatory stage.

A more common & probably safer course to meet this indication is by antimonials alone or in minute doses combined with nitre. Mercury has been used in this disease. Dr. Rush thought it was beneficial urged even to salivation. Mercury doubtless has been of benefit in chronic pulmonary affections. Dr. Parr mentions that he has often found infarcation of the liver to precede Phthisis, & where the disease is said to arise from hard study, a sedentary life or depressing passions he thinks the foundation is laid in the liver. Phthisis is generally considered of scrofulous origin, if so, as astringent articles in scrofula are exhibited with the happiest effect, the same should obtain where Phthisis, a scrofulous affection of the lungs; but this is not the case, they are inadmissible. The same happens in diseases of the liver, & thus complicated, no doubt

mercury would be of advantage, if not indispensable. This complication of Phthisis may in part account for the injurious effects of a Southern residence to some consumptive patients, while it is so very beneficial to others.

As a remedy in Phthisis; digitalis has been variously estimated; by Doctors Beddoes, Drake, Fowler, & Darwin, it has been considered nearly in the light of a specific; others of respectability are not wanting who consider it of the first importance; at present it is less highly estimated & we are informed by Professor Chapman that it is only admissible in the first stage of Phthisis; this seems to be the opinion of late writers as to its powers. Kingslake, (better known by his treatise on gout) gives, in a work of his, fourteen cases of the disease chiefly in the incipient stage, in about one half of which this medicine was decidedly advantageous. In the suppurative or ulcerative

stage he accomplished only one cure. M'Clean on foxglove says, those who expect wonders from it or that it will in general cure consumption will be disappointed. The disease not arrested, abscesses, hectic fever, & its concomitants so much to be dreaded take place. Professor Chapman now considers the case entirely beyond the control & power of medicine, & that it must inevitably prove fatal. Though the case is confessedly beyond the power of medicine to cure it is not out of the reach of palliatives and it is always right and necessary that they should be exhibited. The indications now are to remove the hectic fever, allay the night-sweats & check diarrhea all which tend to debilitate & exhaust the patient in a very rapid manner. To remove the hectic, various remedies have been proposed, but, as the affections just noticed are symptomatic, all that can be done

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is to palliate. From trial, Dr. Robinson of London recommends vinegar as the best palliative in hectic. He mentions that it allays the colliquative sweats & that it checks the diarrhœa so apt to supervene. This practice is said to have been introduced from Africa; costiveness following the exhibition of vinegar is said to be a favourable sign. The wild-cherry tree bark; Sacc-Saturni recommended by Paracelsus about the year 1545 in all the thoracic affections, & by Etmullen in 1675 particularly in hectic; with numerous other articles have been used, possessing more or less of a palliative property. The sulphuric acid is given in the form of elixir of vitriol; this may be combined with the Peruvian bark or the vegetable bitters, or astringents. Inhalations have been much used in Phthisis, but other than palliatives they are of little effect. Dr. Mudge recommended the vapour

of ether & tar. To allay the cough & afsist expectoration the inhalation of warm water is found of service. Night sweats are checked by sleeping in flannel & rubbing the surface of the body before retiring with some stimulating article. The best remedy for Diarrhœa is an anodine injection, or suppository; a decoction of the wild-cherry tree bark is a popular & efficacious check. Diarrhœa will alleviate the distrefsing symptoms, as the cough, dyspnœa &c. but at the same time it is fast exhausting the powers of life, & unlefs checked will prove fatal.

In the last stage the cough, which throughout is troublesome, becomes aggravated; to alleviate this most of the demulcent articles are in use; Gum Arabic answers the purpose very well as it may be kept constantly in the mouth by sticking it against the teeth. The preparations of Nitric acid; Gum Ammonia, &c; are very useful more especially if

there is much dyspnœa. After all, to relieve the patient, our chief reliance is on opium, which has been justly styled the "magnum Dei donum". It has been objected to opium that it checks expectoration; that, when given in the evening, it checks expectoration during the greater part of the night, is allowed; but respectable authority is not wanting which asserts that it promotes & renders more free and easy expectoration the following morning; the sedative property of opium calms the irritated & gives rest to the weakened lungs, so that if the expectoration is not more easy & free the lungs are in a condition better calculated to bear it, which, in a practical view amounts to the same. The properties are attributed to opium independent of its narcotic effects, which are of great benefit in the advanced stage of the disease. Professor Dewees related to me the case of a

married Lady attended by Professor Physic & himself, whose cough was very harassing; with purulent expectoration; night sweats; suppression of the menses; her strength & flesh wasted very fast; in fine had all the appearances of a confirmed Phthisis for 18 months, but at last recovered from the use of opium, camphor, & a low diet.

Hæmoptysis occurring in the advanced stage of this disease is to be checked by a strict adherence to the antiphlogistic plan of treatment; cold applications should be made to the armpits, also to the genital organs which are very susceptible of their impression; advantage will be derived from a cold pediluvium. The Sacc- Saturni is here administered; if the vigour of the circulation is increased, its use ought to be preceded by Venesection otherwise it will prove detrimental. The dose, ∞ two

or three grs. to be repeated every three or four hours. Dr. Rush directs the use of common salt in the dose of a tea or table spoon-full repeated every fifteen or twenty minutes, & says that this succeeds equally well in hæmorrhage whether in the young or old or with a weak or active pulse. We are informed by Professor Chapman that there is not the least doubt of the efficacy of salt. Dr. Baillie, when lecturing on the lungs, used, in order to arrest the attention, to stop short & mention to his pupils that 20 or 25 gtts of Spes turpentine in a glass of water according to the age of the patient was a valuable remedy in hæmoptysis & never to be neglected.
As a prophylactic mean the diet should be light, rest should be enjoined, & occasionally cooling laxatives administered. Much may be effected by the use of blisters.

It has been strenuously advised that our prescription of medicines as much as possible should be external; one gr of the acetate of lead applied to a denuded surface is said to act as powerfully, and effectually in allaying the cough & pain as when given internally & that to check a diarrhœa opium should always be used in the form of an enema. It is necessary that the physiological state of the stomach should be scrupulously watched. Dr. Mudge laboured under Phthisis 28 years & in the end, we are informed by Dr. Jackson, died of gastritis. Gastritis is said to be the immediate cause of death in nearly the one half of Phthisical patients.

The desire to evade this terrible malady is too well known to need more than its mention. But to the question, 'Whither shall I fly, or which is the most appropriate

situation, few can give a direct & positive answer. Dr. Rush recommends travelling on horseback, or, should it agree better, in an open carriage from one extremity of the United States to the other avoiding the sea-coast, spending their winters at the South & their summers at the North & especially to avoid the night air. Dr. Keill observes that bodies emaciated by sickness, or evacuations of whatever kind draw more than full ones; hence the reason why those who suffer from chronic disease experience in the evening more uneasiness or pain than during the day.

As to a permanent situation whether it should be high or low, clear & dry or moist, there is a diversity of sentiment. High situations were preferred until the time of Dr. Bond, who sent his patients to the low parts of New-Jersey or Delaware,

where the atmosphere was very moist, & stated that his patients, if not cured, were much benefitted, especially if they had an attack of the ague & fever. No country is said to be more subject to Phthisis than Great Britain; there is a part, however, called the fens of one County (Lincolnshire) in which the inhabitants are not liable to this disease, whilst in another part of the same county, called the Wolds, the inhabitants are as subject to consumption as in any other part of G.-Britain. The inhabitants of the fens are subject to ague & fever — of the Wolds to Phthisis, & if not cured by an exchange of situations are at least greatly benefitted; the Wolds are exposed to the cold bleak-cutting North & North-West winds, while the Fens are subject to the influence of marsh Miasma.

Hence it appears that the Wolds are subject to a pneumonetic principle; (if the term may be allowed;) it is just as philosophical to attribute Phthisis, in part at least, to the influence of the North West wind as to theorise on the noxious qualities of Marsh Miasma. We see the Hollander, enveloped in perennial clouds, the most robust of his species, not exposed to the North West winds, not liable to Phthisis pulmonalis. As an exposition of the same point, we may see the Indian of our western forest who passes all his life in places where the sun scarcely ever reaches, consequently surrounded with continual moisture, though unexposed to winds. The deadly influence of the Sirocco is attributed to its aridity. The noxious influence of the East wind has been proverbial from

time immemorial; & the wind most deadly in its influence, being so from its dryness, we should anteriori infer, as the North West wind is more arid than the East, that it would be more deleterious. Asthmatic patients, instinctively avoiding high & dry situations, "give nature -- nature's due".

After all Physicians generally agree that when Phthisis has advanced to the last stage the patient had better remain at home, or at least in his own country & that the little advantage obtained by any residence whatever will poorly compensate for the loss of the society of his friends & their attentions of which he will be in so great & constant need. If he remain at home he may pass the winter in a regulated temperature; the clothing should be regula-

ted according to the weather & the habits of the patient, as it is not so much from the lightness as from the change of dress that we suffer. When an Indian was asked how, so nearly naked, he could bear the severe winters of Canada, he replied "that he was all face." It has been recommended to patients labouring under Phthisis to wear next to the skin oiled silk so as to prevent the too speedy evaporation of the matter of perspiration, & thereby in a measure prevent those debilitating sweats to which they are so liable. In winter the patient should sleep between blankets & in summer on a mattress; the former prevents fresh cold from night sweats & the latter is said frequently altogether to check night sweats. To prevent taking cold at every exposure the patient may wear a large Burgundy pitch plaster on his breast, which, by the slight irritation produced, prevents the effects of cold, so much to be dreaded in

this complaint.

Exercise has been considered the grand prophylactic in this disease. The following will suffice as to its rules, both in a prophylactic & therapeutic view,

"Begin with gentle toil, &, as your nerves "
"Grow firm, to hardier, by just steps aspire. "
"The prudent, even in every moderate walk, "
"At first but saunter, & by slow degrees "
"Increase their pace. This doctrine of the wise "
"Well knows the master of the flying steed. "

The aliment most proper for consumptive patients is that which will afford sufficient nourishment, creating the least excitement. Milk is universally recommended. Dr Buchan says that milk alone is of more value than all the medicines of the Materia Medica. Owing to idiosyncrasies no particular dietetic rules can with propriety be suggested. The extremes of Sangrado & Brown are alike to be avoided, & not, while avoiding Scylla, break on Charybdis.

The meals of whatever kind should be taken at regular intervals so that the digestive apparatus may have rest & sufficient time for recruiting its energies. If any rule were given to a Phthisical patient it should be, 'Be moderate in all things' & constantly to bear in mind that prudent reply of Lord Bacon's when urged to drink to the King's health, viz, 'That he would drink for his own health & pray for that of the King.'